

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 May 2005 (06.05.2005)

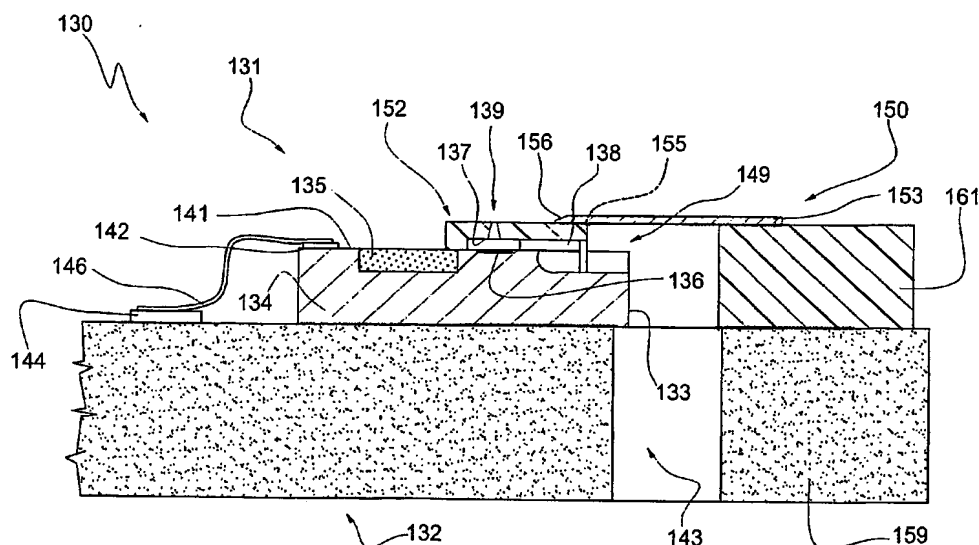
PCT

(10) International Publication Number  
**WO 2005/039880 A1**

- (51) International Patent Classification<sup>7</sup>: **B41J 2/155** (74) Agent: GALLO, Mario; c/o Telecom Italia S.p.A., Via Jervis, 77, I-10015 Ivrea (IT).
- (21) International Application Number: PCT/IT2004/000586 (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 27 October 2004 (27.10.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
TO2003A000841 27 October 2003 (27.10.2003) IT
- (71) Applicant (for all designated States except US):  
**OLIVETTI I-JET S.P.A.** [IT/IT]; Localita' Le Vieux, I-11020 Arnad (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **CONTA, Renato** [IT/IT]; c/o Olivetti I-Jet S.p.A., Localita' Le Vieux, I-11020 Arnad (IT). **GIOVANOLA, Lucia** [IT/IT]; c/o Olivetti I-Jet S.p.A., Localita' Le Vieux, I-11020 Arnad (IT).
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: INK JET PRINTHEAD AND ITS MANUFACTURING PROCESS



(57) Abstract: Ink jet printhead (130) comprising one or more ejection modules (131), each with a silicon chip (134), a plurality of ejector nozzles (139) arranged adjacent to a front (133) of the module, ejection cells (137) for the nozzles and delivery channels (138) for the ink of the cells (137). The module or modules each include a distribution channel (149) adjacent to the front (133) and in fluid communication with the delivery channels (138) and a nozzle layer (152) integrated with the relative chip (134) and in which the ejector nozzles (139) parallel to the front are made. The head (130) also comprises a support (132) on which the module or modules (131) are mounted and which defines a feeding duct (143) for the ink in fluid communication with the delivery channels (138) and sealing means (150) between the module or modules and the support to guarantee fluid tightness between the feeding duct (143) and the ejection cells (139).

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,

IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- of inventorship (Rule 4.17(iv)) for US only

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.